

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

Element Code: ARADB36110

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Thamnophis rufipunctatus*
COMMON NAME: Narrow-headed Gartersnake
SYNONYMS: *Natrix rufipunctatus*, *Thamnophis angustirostris*
FAMILY: Serpentes: Colubridae

AUTHOR, PLACE OF PUBLICATION: Cope. 1875.

TYPE LOCALITY:

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: About 21+ species in this genus which ranges from southern Canada to Costa Rica in Central America and from the Pacific to the Atlantic coasts (Stebbins 1985). This species has controversial generic status. It is believed to be a bridging species between *Thamnophis* and *Nerodia* (Shaw and Campbell 1974).

DESCRIPTION: Small to medium sized gartersnake with a total length of 46-112 cm (18-44 in). Olive to brown in color with no (or only faintly present) back or side stripes, but with distinct dark brown, dull brick red, or blackish spots on back, that fade on tail. No well-developed stripes or pale crescent behind corner of mouth as in some species of gartersnakes. Brownsih gray below, paling on throat. Venter usually brownish-gray, often with two rows of blackish wedges that fade posteriorly. Because of this drab coloring and high set eyes, this species more closely resembles *Nerodia* (watersnakes) than other *Thamnophis*. Also, the head is narrow and more elongated than most other *Thamnophis*. The tongue is black. Scales keeled, usually 21 rows at mid-body. Anal plate usually single but can be divided. Eight upper labials; dark bars on labial scales. Young have a dull yellowish belly, and often a cream-colored throat.

AIDS TO IDENTIFICATION: Lack of stripes on dorsum and sides, eyes high on blunt-nosed elongate head separates this species from other gartersnakes in Arizona (Rosen 1988).

ILLUSTRATIONS: Color drawing (Stebbins 1985: Pl. 43)
Color drawing (Stebbins 2003: Pl. 48)
Color photo (Behler and King 1979: Pl. 548)
Color photo (Marin Feldner www.reptileofaz.com)

Color photo (<http://myweb.cableone.net/azmilk/azs-narrow.htm>)

TOTAL RANGE: Mountains of central and eastern Arizona and west-central New Mexico in Mogollon Rim area; disjunct from range in northern Sonora and Chihuahua south in Sierra Madre Occidental to central Durango.

RANGE WITHIN ARIZONA: Upland drainages from central and eastern Arizona from White Mountains along the Mogollon Rim up into Oak Creek Canyon, in Apache, Coconino, Gila, Graham, Greenlee, Navajo, and Yavapai counties. Good populations found at Oak Creek Canyon, and the East Verde River.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Found in, or next to, well-lit sections of clear, cool, permanently flowing, rocky streams in areas of pinyon-juniper, oak-pine, or ponderosa pine, commonly sheltered by broadleaf deciduous trees (cottonwood-willow). Seeks cover under rocks in water when disturbed (Stebbins 1985). Inactive in cold temperatures or extreme heat. Almost strictly aquatic, seldom seen more than a meter from water.

REPRODUCTION: Viviparous/ovoviviparous (live-bearing); 8-18 young born July-August.

FOOD HABITS: Hunts fish, frogs, toads, tadpoles, and larval Tiger salamanders; also aquatic invertebrates.

HABITAT: In Arizona, pinyon-juniper and pine-oak woodland into ponderosa pine forest; in permanently flowing streams, sometimes sheltered by broadleaf deciduous trees. Important components of bank vegetation include shrub-sized and sapling Arizona alder (the most conspicuous species), velvet ash, willows and canyon grape. (Rosen and Schwalbe 1988).

ELEVATION: 2,440 – 8,080 [744-2463 m], (non-published data from database in HDMS, AGFD 2002). Stebbins (2003) report elevation range from 2,300 – 7,972 ft (700-2430 m).

PLANT COMMUNITY: Pinyon-juniper and oak-pine belts into forests of ponderosa pine.

POPULATION TRENDS: Some populations appear stable, while others are declining. Believed to be extirpated from Flagstaff and Wall Lake, Arizona areas where it was formerly abundant. It is also becoming more difficult to find in historical strongholds like Oak Creek Arizona.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1994]
[C2 USDI, FWS 1991]
[C2 USDI, FWS 1989]
[C2 USDI, FWS 1985]

STATE STATUS: WSC (AGFD, WSCA in prep)
[State Candidate AGFD, TNW 1988]

OTHER STATUS: Forest Service Sensitive (USDA, FS Region
3 1999)
[Forest Service Sensitive USDA, FS Region
3 1988]

MANAGEMENT FACTORS: Lowered water table; habitat modification; grazing along streambeds and increased recreational use in riparian areas. Also introduction of predators such as bullfrogs and some fishes, and habitat fragmentation.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Distribution, habitat, population and life history studies.

LAND MANAGEMENT/OWNERSHIP: BIA – Fort Apache and San Carlos Reservations; USFS – Apache-Sitgreaves, Coconino, Prescott, and Tonto National Forests; Red Rock State Park; AGFD Chevelon Canyon Ranches; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Arizona Game and Fish Department. 1988. Threatened native wildlife in Arizona. Arizona Game and Fish Department Publication. Phoenix, Arizona. P. 12.
- Arizona Game and Fish Department. In prep. Wildlife of special concern in Arizona. Arizona Game and Fish Department Publication. Phoenix, Arizona. 32 pp.
- Behler, J.L. and F.W. King. 1979. The Audubon Society field guide to North American reptiles and amphibians. Alfred A. Knopf, New York. P. 672.
- BISON, Biota Information System of New Mexico web site, <http://nmnhp.unm.edu>.
- Fitzgerald, L.A. 1986. A comparison of the systematics and general biology of *Thamnophis rufipunctatus* and *Nerodia harteri*. Unpublished report to US Fish and Wildlife Service, Albuquerque, New Mexico.
- Fleharty, E.D. 1967. Comparative ecology of *Thamnophis elegans*, *T. cyrtopsis*, and *T. rufipunctatus* in New Mexico. The Southwestern Naturalist 12(3): 207-230.
- Fowle, J.A., M.D. 1965. The snakes of Arizona. Azul Quinta Press, Fallbrook, California. P. 126.

- Lowe, C.H. 1964. Amphibians and reptiles. The vertebrates of Arizona. University of Arizona Press. Tucson, Arizona. P. 167.
- NatureServe Explorer: an online encyclopedia of life [web application]. 2001. version 1.6
Arlington Virginia, USA: NatureServe. <http://natureserve.org/explorer>.
- Rosen, P.C. and C.R. Schwalbe. 1988. Status of the Mexican and narrow-headed garter snakes (*Thamnophis eques megalops* and *Thamnophis rufipunctatus rufipunctatus*) in Arizona. Unpublished report from Arizona Game and Fish Department (Phoenix, Arizona) to U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- Shaw, C.E. and S. Campbell. 1974. Snakes of the American west. Alfred A. Knopf, New York. P. 136.
- Stebbins, R.C. 1954. Amphibians and reptiles of western North America. McGraw-Hill Book Company, Inc., New York. Pp. 411-414.
- Stebbins, R.C. 1985. A field guide to western reptiles and amphibians. Second edition, revised. Houghton Mifflin Company. Boston, MA. Pp. 199.
- Tanner, W.W. 1959. A new *Thamnophis* from Western Chihuahua with notes on four other species. *Herpetologica* 15(4): 165-172.
- USDA, Forest Service Region 3. 1988. Regional Forester's Sensitive Species List.
- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.
- USDI, Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants; Review of Vertebrate Wildlife; Notice of Review. *Federal Register* 50(181): 37963.
- USDI, Fish and Wildlife Service. 1989. Endangered and Threatened Wildlife and Plants; Animal Notice of Review. *Federal Register* 54(4): 559.
- USDI, Fish and Wildlife Service. 1991. Endangered and Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species, Proposed Rule. *Federal Register* 56(225): 58813.
- USDI, Fish and Wildlife Service. 1994. Endangered and Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species; Proposed Rule. *Federal Register* 59(219): 58994.
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species, Proposed Rule. *Federal Register* 61(40): 7596-7613.
- Wright, A.H. and A.A. Wright. 1957. Handbook of snakes of the United States and Canada. Vol.I. Comstock Publishing Associates, Ithaca, New York. Pp. 762-766.
- Woodin, W.H. III. 1950. Notes on Arizona species of *Thamnophis*. *Herpetologica* 6: 39-41.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Phil Rosen - University of Arizona, Tucson.

ADDITIONAL INFORMATION:

Revised: 1993-08-23 (SSS)
1995-03-24 (JMH)
1997-03-06 (SMS)
2002-11-07 (RHB)

To the user of this abstract: you may use the entire abstract or any part of it. We do request, however, that if you make use of this abstract in plans, reports, publications, etc. that you credit the Arizona Game and Fish Department. Please use the following citation:

Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.